Formalities:
AMENDMENT TO SPECIFICATION AND CLAIMS IN ACCORDANCE WITH 37 CFR 1.821-1.825

As an initial matter, Applicant gratefully acknowledges the telephone conference with the Examiner on April 30, 2003, in which the proposed amendments to the claims and specification were discussed. Specifically, there is a problem with the current SEQ ID Nos. for the sequence listings in the present application. SEQ ID. Nos. 1 and 2 should represent fixed polypeptide sequences, while SEQ ID Nos. 3-6 should represent variable polypeptide sequences. However, in correcting an error with the reporting of these sequence listings (submission of November 4, 2002), SEQ ID Nos. 1 and 2 were inadvertently omitted and only SEQ ID Nos. 3-6 were provided to the Patent Office, but these were listed as SEQ ID Nos. 1-4. The net effect of this error is that it cancelled out the original SEQ ID Nos. 1 and 2. This error has been corrected herein in a re-submission of all sequence listings in this application which now read as SEQ ID Nos. 1-6.

Please amend claims 11, 25, 37 and 42 as follows:

1) (Original) A method for delivering a pharmaceutical agent through a membrane, wherein the method comprises applying to said membrane a composition comprising:

a) anionic phospholipids;

b) a safe and effective amount of the pharmaceutical agent contained within the phospholipids; and

c) a fusogenic protein or polypeptide derived from prosaposin

in a pharmaceutically acceptable carrier, wherein the concentration of the fusogenic protein or polypeptide is of a sufficient amount to deliver the pharmaceutical agent through the membrane.

2) (Original) The method of claim 2 wherein the concentration of phospholipids are in at least a 10-fold excess, by weight, to that of the fusogenic protein or polypeptide.

3) (Original) The method of claim 2 wherein the pH of the composition is between about 5.5 and 2.

4) (Original) The method of claim 3 wherein the anionic phospholipid is an anionic liposome.

5) (Original) The method of claim 4 wherein the fusogenic protein or polypeptide is associated with the liposome through an electrostatic and hydrophobic interaction.

6) (Original) The method of claim 5 wherein the membrane is selected from the group consisting of dermal and mucosal membranes.

7) (Original) The method of claim 6 wherein the fusogenic protein or polypeptide is selected from the group consisting of saposin A, saposin C, polypeptide analogs, derivatives, homologues, fragments of saposin A and saposin C, and mixtures thereof.

8) (Original) The method of claim 6 wherein the fusogenic protein or polypeptide is saposin C.

9) (Original) The method of claim 6 wherein the fusogenic protein or polypeptide is SEQ. ID. NO. 1.

10) (Original) The method of claim 6 wherein the fusogenic protein or polypeptide is SEQ. ID. NO. 2.

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11. (Currently Amended) The method of claim 6 wherein the fusogenic protein or polypeptide is of the formula given by SEQ ID Nos. 3-6.

~~h-u-Cys-Glu-h-Cys-Glu-h-h-h-Lys-Glu-h-u-Lys-h-h-Asp-Asn-Asn-Lys-u-Glu-Lys-Glu-h-h-Asp-h-h-Asp-Lys-h-Cys-u-Lys-h-h,~~

~~where h = hydrophobic amino acids, including, Val, Leu, Ile, Met, Pro, Phe, and Ala; and~~

~~u = uncharged polar amino acids, including, Thr, Ser, Tyr, Gly, Gln, and Asn.~~

12) (Original) The method of claim 7 wherein administration of the composition is via a transdermal patch.

13) (Original) The method of claim 7 wherein the composition is administered either enterally or topically.

14) (Original) A method for delivering a pharmaceutical agent through either a dermal or mucosal membrane, wherein the method comprises the administration to said membrane of a composition comprising:

a) anionic liposomes;

b) a safe and effective amount of the pharmaceutical agent contained within the liposomes; and

c) saposin C;

in a pharmaceutically acceptable carrier, wherein the concentration of the liposomes are of a sufficient amount to deliver a safe and effective amount of the pharmaceutical agent through the membrane, the pH of the composition is between about 5.5 and 2, and the saposin C is associated with the surface of the liposome through an electrostatic and hydrophobic interaction.

15) (Original) The method of claim 14 wherein the concentration of the liposomes is in at least a 10-fold excess, by weight, to that of saposin C.

16) (Original) A therapeutic phospholipid composition comprising:

a) an anionic phospholipid;

b) a safe and effective amount of the pharmaceutical agent contained within the phospholipids; and

c) a fusogenic protein or polypeptide derived from prosaposin;

in a pharmaceutically acceptable carrier, wherein the concentration of the fusogenic protein or polypeptide is present in a sufficient concentration to deliver the pharmaceutical agent through a biological membrane and the fusogenic

protein or polypeptide is associated with the phospholipid through an electrostatic and hydrophobic interaction.

17) (Original) The phospholipid composition of claim 16 wherein the concentration of phospholipids is in at least a 10-fold excess, by weight, to that of the fusogenic protein or polypeptide.

18) (Original) The phospholipid composition of claim 17 wherein the pH of the composition is between about 5.5 and 2.

19) (Original) The phospholipid composition of claim 18 wherein the anionic phospholipid is an anionic liposome.

20) (Original) The phospholipid composition of claim 19 wherein the biological membrane is selected from the group consisting of dermal and mucosal membranes.

21) (Original) The phospholipid composition of claim 20 wherein the fusogenic protein or polypeptide is selected from the group consisting of saposin A, saposin C, polypeptide analogs, derivatives, homologues, fragments of saposin A and saposin C, and mixtures thereof.

22) (Original) The phospholipid composition of claim 20 wherein the fusogenic protein or polypeptide is saposin C.

23) (Original) The phospholipid composition of claim 20 wherein the fusogenic protein or polypeptide is SEQ. ID. NO. 1.

24) (Original) The phospholipid composition of claim 20 wherein the fusogenic protein or polypeptide is SEQ. ID. NO. 2.

25) (Currently Amended) The phospholipid composition of claim 20 wherein the fusogenic protein or polypeptide is of the formula given by SEQ ID Nos. 3-6

~~h h u Cys Glu h Cys Glu h h h Lys Glu h u Lys h h Asp Asn Asn Lys u Glu Lys Glu h h Asp h h Asp Lys h Cys u Lys h h,~~

~~where h = hydrophobic amino acids, including, Val, Leu, Ile, Met, Pro, Phe, and Ala; and~~

~~u = uncharged polar amino acids, including, Thr, Ser, Tyr, Gly, Gln, and Asn~~.

26) (Original) The phospholipid composition of claim 21 wherein the composition is formulated as part of a transdermal patch.

27) (Original) The phospholipid composition of claim 21 wherein the composition is formulated for enteral or topical administration.

28) (Original) A therapeutic phospholipid composition used to deliver a pharmaceutical agent through either a dermal or mucosal membrane, wherein the composition comprises:

a) anionic liposomes;

b) a safe and effective amount of the pharmaceutical agent contained within the liposomes; and

c) a fusogenic protein or polypeptide selected from the group consisting of saposin C, polypeptide analogs, derivatives, homologues, fragments of saposin C, and mixtures thereof;

in a pharmaceutically acceptable carrier where the pH of the composition is between about 5.5 and 2, wherein the concentration of the fusogenic protein or polypeptide is of a sufficient amount to deliver the pharmaceutical agent through a biological membrane and the fusogenic protein or polypeptide is associated with the surface of the liposome through an electrostatic and hydrophobic interaction.

29) (Original) The phospholipid composition of claim 28 wherein the concentration of the liposomes is in at least a 10-fold excess, by weight, to that of saposin C.

30) (Original) A composition comprising a safe and effective amount of a pharmaceutical agent contained in an anionic liposome, which is associated with a prosaposin-derived fusogenic protein or polypeptide via an electrostatic and hydrophobic interaction, wherein the concentration of the fusogenic protein or polypeptide is of a sufficient amount to deliver the pharmaceutical agent through a biological membrane, the composition contained in a pharmaceutically acceptable carrier, wherein the pH of the composition is between about 5.5 and 2.

31) (Original) The composition of claim 30 wherein the concentration of liposomes is in at least a 10-fold excess, by weight, to that of the fusogenic protein or polypeptide.

32) (Original) The composition of claim 31 wherein the biological membrane is selected from the group consisting of dermal and mucosal membranes.

33) (Original) The composition of claim 32 wherein the fusogenic protein or polypeptide is selected from the group consisting of saposin A, saposin C, polypeptide analogs, derivatives, homologues, fragments of saposin A and saposin C, and mixtures thereof.

34) (Original) The phospholipid composition of claim 31 wherein the fusogenic protein or polypeptide is saposin C.

35) (Original) The composition of claim 31 wherein the fusogenic protein or polypeptide is SEQ.ID.NO. 1.

36) (Original) The composition of claim 31 wherein the fusogenic protein or polypeptide is SEQ.ID.NO. 2.

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37. (Currently Amended) The composition of claim 31 wherein the fusogenic protein or polypeptide is of the formula given by SEQ ID Nos. 3-6.

~~h-u-Cys-Glu-h-Cys-Glu-h-h-h-Lys-Glu-h-u-Lys-h-h-Asp-Asn-Asn-Lys-u-Glu-Lys-Glu-h-h-Asp-h-h-Asp-Lys-h-Cys-u-Lys-h-h,~~

~~where h = hydrophobic amino acids, including, Val, Leu, Ile, Met, Pro, Phe, and Ala; and~~

~~u = uncharged polar amino acids, including, Thr, Ser, Tyr, Gly, Gln, and Asn~~.

38) (Original) A phospholipid composition used to deliver a pharmaceutical agent through either a dermal or mucosal membrane, wherein the composition comprises:

a) anionic liposomes;

b) a safe and effective amount of the pharmaceutical agent contained within the liposomes; and

c) saposin C;

in a pharmaceutically acceptable carrier, wherein the pH of the composition is between about 5.5 and 2, the concentration of the saposin C is of a sufficient amount to deliver the pharmaceutical agent through the membrane and the saposin C is associated with the surface of the liposome through an electrostatic and hydrophobic interaction.

39) (Original) The phospholipid composition of claim 38 wherein the concentration of the liposome is in at least a 10-fold excess, by weight, to that of saposin C.

40) (Original) The polypeptide of SEQ. ID. NO. 1.

41) (Original) The polypeptide of SEQ. ID. NO. 2.

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42. (Currently Amended) A compound of the formula given by SEQ ID Nos. 3-6.

~~h-u-Cys-Glu-h-Cys-Glu-h-h-h-Lys-Glu-h-u-Lys-h-h-Asp-Asn-Asn-Lys-u-Glu-Lys-Glu-h-h-Asp-h-h-Asp-Lys-h-Cys-u-Lys-h-h,~~

~~where h = hydrophobic amino acids, including, Val, Leu, Ile, Met, Pro, Phe, and Ala; and~~

~~u = uncharged polar amino acids, including, Thr, Ser, Tyr, Gly, Gln, and Asn.~~

43) (Original) A method for treating Gauchers Disease wherein the method comprises the administration of a composition comprising:

a) anionic liposomes;

b) a safe and effective amount of acid beta-glucosidase contained within the liposomes; and

c) saposin C;

in a pharmaceutically acceptable carrier, wherein the pH of the composition between about 5.5 and 2, the concentration of the saposin C is of a sufficient amount to deliver the pharmaceutical agent through the membrane and the saposin C is associated with the surface of the liposome through an electrostatic and hydrophobic interaction.

44) (Original) The method of claim 43 wherein the concentration of the liposome is in at least a 10-fold excess, by weight, to that of saposin C.